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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/546,262	04/10/2000	Khuy V. Nguyen	2000-104	3048

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EXAMINER

TSANG FOSTER, SUSY N

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

0525

Office Action Summary

Application No.

09/546,262

Applicant(s)

NGUYEN ET AL.

Examiner

Susy N Tsang-Foster

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/8/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,8-12,14 and 15 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/8/2003 has been entered.

Response to Amendment

2. This Office Action is responsive to the amendment filed on 8/8/2003. Claims 1-3, 6, and 7 have been cancelled. Claim 9 has been amended. Claims 14 and 15 have been added. Claims 4, 5, and 8-15 are pending. Claim 13 is objected to. Claims 4, 5, 8-12, 14, and 15 are rejected for reasons given below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 8-12, 14, and 15 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takita et al. (US 5,922,492).

Takita et al. disclose a lithium rechargeable battery comprising a composite separator comprising a microporous polyolefinic membrane having a porosity of 30 to 95%, an average pore size of 0.001 to 1 micron, an air permeability of 100 to 2000 sec/100cc, and being made from a blend of a high density polyethylene polymer as the matrix polyolefin component and a low molecular weight polyethylene as the shutdown polymer component having an average molecular weight of 1000 to 4000 (which is also known as a polyethylene wax) wherein the low molecular weight polyethylene may be used in an amount of 5 to 30 weight % based on the total weight of the shutdown polymer and the matrix polyolefin component (col. 3, lines 5-22; col. 4, lines 3-58). The composite separator has a thickness of 25 to 200 microns and preferably 25 to 100 microns (col. 3, lines 1-11 and col. 7, lines 60-62) which overlaps with the claimed range of less than 3 mils (76 microns).

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The battery composite separator also comprises a polyolefin nonwoven fabric that may be laminated on one of the surface of the microporous polyolefin membrane or may be laminated on both surfaces of the microporous polyolefin membrane (col. 7, lines 50-60). The shutdown temperature of the composite separator is 105 to 135 °C (col. 8, lines 11-16). The microporous polyolefinic membrane of the composite separator has a thickness of 5 to 50 microns before subjected to the lamination treatment (col. 6, lines 8-15).

The separator is disposed between the anode and cathode of the lithium battery and an electrolyte in the battery is in ionic communication with the anode and cathode via the separator (col. 1, lines 14-25).

Although the reference does not explicitly disclose that the microporous polyolefinic membrane of the composite separator has a shutdown temperature of less than about 125 °C, less than about 123 °C, or less than about 120 °C, a microporous polyolefinic membrane comprising a blend of high density polyethylene and at least 20% to 30 weight % of the polyethylene wax in the blend and having a porosity of 30 to 95% , an average pore size of 0.001 to 1 micron, a thickness of 5 to 50 microns, and an air permeability of 100 to 2000 sec/100cc will inherently have a shutdown temperature of less than about 125 °C, or about 123 °C or about 120 °C, and a breadth of temperature response for shutdown being 4-5 °C.

The court has held that claiming of a property or characteristic which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See also MPEP 2112 and 2112.01. When the

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Examiner has provided a sound basis for believing that the products of the applicant and the prior art are the same, the burden of proof is shifted to the applicant to prove that the product shown in the prior art does not possess the characteristics of the claimed product. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Response to Arguments

6. Applicant's arguments with respect to claims 4, 5, and 8-11 rejected under 35 USC 102(a) as being anticipated JP 11-240970 A have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

7. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record, Takita et al. (US 5,922,492) does not disclose, teach, or suggest that the polyolefin membrane of the composite separator comprises a medium molecular weight high density polyethylene.

Conclusion

9. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Friday from 9:30 AM to 7:00 PM.

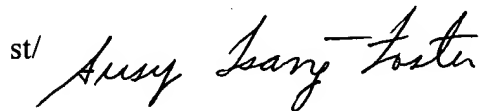
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/

A handwritten signature in cursive script, reading "Susy Tsang-Foster".

Susy Tsang-Foster
Primary Examiner
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